

Non-Pyrotechnic Latch and Release System for Aerospace and Other Applications, Phase I

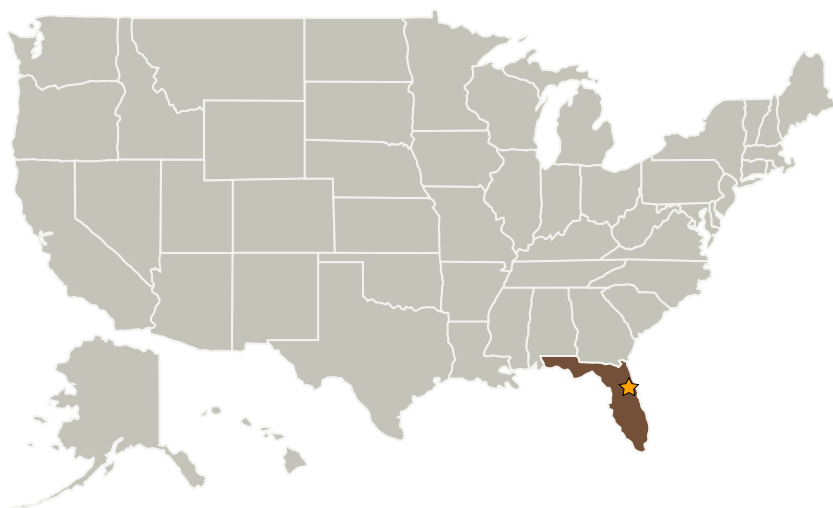
Completed Technology Project (2005 - 2005)



Project Introduction

American Remote Vision Company (ARVC) will research and develop a novel new type of non-pyrotechnic latch and release system for use in servicing umbilical applications (as well as an enormous range of other aerospace and commercial applications). This device (whose starting point is the ancient "chinese fingercuff") will be a robust, reliable, reusable latch; scalable over many orders of magnitude in size and load; capable of gripping or releasing in milliseconds; and useful in lunar regolith environment. The concept has already been proved at the 1,000 pound level. We will develop the theory of operation in grab, hold, and release modes (and maybe failure modes). We will build prototypes and test them to verify the math models.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Kennedy Space Center(KSC)	Lead Organization	NASA Center	Kennedy Space Center, Florida
American Remote Vision Company	Supporting Organization	Industry	Florida



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Kennedy Space Center (KSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations

Florida

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Stuart Gleman

Technology Areas

Primary:

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
 - └ TX12.3 Mechanical Systems
 - └ TX12.3.8 Docking and Berthing Mechanisms and Fixtures